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EXAMINER	
RICHARDSON, THOMAS W	

ART UNIT	PAPER NUMBER
2109	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/761,105	ALAM ET AL.	
	Examiner	Art Unit	
	Thomas Richardson	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *23 February 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-15 are pending for examination.

Claims 1-15 are rejected.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: System 10, as mentioned on page 8, paragraph 1, as well as Internet 32, which appears on page 8, paragraph 2. Also, step 248, described on page 12, paragraph 1 does not appear in figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4, 5, 6, 8, 10, 11, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6 973 546, Johnson in combination with US 6 697 795, Holcomb.

5. As per claim 1, Johnson discloses a method for accessing a first application by a first server and then replacing said first application with a second application executing in a second server, said first server having a first, local storage, said second server having a second, local storage (abstract, wherein a plurality of cached systems is

disclosed, where each may contain different versions of an object), said method comprising the steps of:

routing a request for an application identified by a first level name and a second level name from a proxy server to said first server, said first server requesting from said first local storage said application identified by said first level name and said second level name, said request being redirected from said first local storage to said first application in a shared storage (Column 4, lines 44-50, where the cache server may act as a proxy server if the requested object is not contained in the local cache, and the request is then routed to another local cache server); and

subsequently routing a request to a second server, for said application identified by said first level name and said second level name, said second server requesting from said second local storage, said application identified by said first level name and said second level name, said request being redirected from said second local storage to said second application in said shared storage (Column 5, lines 52-56, where the request is served from another cache if the first does not contain the requested object).

Johnson does not teach a file system to implement, but Holcomb discloses a method for creating a virtual file system, wherein the system forms a hierarchic data structure:

said first application in said shared storage having said first level name, said second level name and a third level name, wherein said first level name, said second level name and said third level name of said first application form a

hierarchical directory in said shared storage (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory); and

said second application in said shared storage having said first level name, said second level name and a third level name different than said third level name of said first application in said shared storage, wherein said first level name, said second level name and said third level name of said second application form a hierarchical directory in said shared storage (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory. The differing files, e.g. F85 and F86, show that two files may contain the same high-level names, with the difference in name only on the level of the actual file).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ Holcomb's file naming system in Johnson's distributed data system. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

6. As per claim 2, the combination of Johnson and Holcomb teaches a method as set forth in claim 1 wherein said second application is a more recent version of said first application (Johnson teaches this limitation in the abstract, wherein multiple caches may have different versions of the objects).

7. As per claim 4, the combination of Johnson and Holcomb teaches a method as set forth in claim 1 further comprising a third server which accesses from said shared storage said first application identified by said first level name, said second level name and said third level name of said first application prior to the subsequently routing request step (Johnson teaches this limitation. Column 4, lines 55-57, where the central server downloads the requested file over the Internet).

8. As per claim 5, Johnson teaches a method for accessing a first application by a first server and then replacing said first application with a second application executing in a second server, said first server having a first, local storage, said second server having a second, local storage (abstract, wherein a plurality of cached systems is disclosed, where each may contain different versions of an object), said method comprising the steps of:

> routing a request for an application identified by a first hierarchical directory from a proxy server to said first server, said first server requesting from said first local storage said application identified by said first hierarchical directory, said first server request being redirected from said first local storage to said first application in said shared storage (Column 4, lines 44-50, where the cache

server may act as a proxy server if the requested object is not contained in the local cache, and the request is then routed to another local cache server), and subsequently routing a request for said application identified by said first hierarchical directory to a second server, said second server requesting from said second local storage said application identified by said first hierarchical directory, said second server request being redirected from said second local storage to said second application in said shared storage (Column 5, lines 52-56, where the request is served from another cache if the first does not contain the requested object).

Johnson does not teach a file system to implement, but Holcomb discloses a method for creating a virtual file system, wherein the system forms a hierarchic data structure

said first application in said shared storage having a second, extended hierarchical directory comprising said first hierarchical directory plus a lower level qualifier (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory); and

said second application in said shared storage having a third, extended hierarchical directory comprising said first hierarchical directory plus a lower level qualifier different than that of said second, extended hierarchical directory (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory. The

differing files, e.g. F85 and F86, show that two files may contain the same high-level names, with the difference in name only on the level of the actual file).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ Holcomb's file naming system in Johnson's distributed data system. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

9. As per claim 6, the combination of Johnson and Holcomb teaches a method as set forth in claim 5 wherein said second application is a more recent version of said first application (Johnson teaches this limitation in the abstract, wherein multiple caches may have different versions of the objects).

10. As per claim 8, the combination of Johnson and Holcomb teaches a method as set forth in claim 5 further comprising a third server which accesses from said shared storage said first application identified by said second, extended hierarchical directory prior to the subsequently routing request step (Johnson teaches this limitation. Column 4, lines 55-57, where the central server downloads the requested file over the Internet).

11. As per claim 10, Johnson teaches a method for controlling access to first and second applications in a shared storage (abstract, where the method for maintaining

data in cached servers includes several servers with the same or different versions of an object), said method comprising the steps of:

a first server requesting from a first local storage a copy of an application identified by a first level name and a second level name, said first server request being redirected from said first local storage to said first application in said shared storage (Column 4, lines 44-50, where the cache server may act as a proxy server if the requested object is not contained in the local cache, and the request is then routed to another local cache server); and

subsequently, a second server requesting from a second local storage a copy of an application identified by said first level name and said second level name, said second server request being redirected from said second local storage to said second application in said shared storage (Column 5, lines 52-56, where the request is server from another cache is the first does not contain the requested object).

Johnson does not teach a file system to implement, but Holcomb discloses a method for creating a virtual file system, wherein the system forms a hierarchic data structure

said first application in said shared storage having said first level name, said second level name and a third level name, wherein said first level name, said second level name and said third level name of said first application form a hierarchical directory in said shared storage (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory); and

said second application in said shared storage having said first level name, said second level name and a third level name different than said third level name of said first application in said shared storage, wherein said first level name, said second level name and said third level name of said second application form a hierarchical directory in said shared storage (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory. The differing files, e.g. F85 and F86, show that two files may contain the same high-level names, with the difference in name only on the level of the actual file).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ Holcomb's file naming system in Johnson's distributed data system. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

12. As per claim 11, Johnson teaches a method for controlling access to first and second applications in a shared storage (abstract, where the method for maintaining data in cached servers includes several servers with the same or different versions of an object), said method comprising the steps of:

a first server requesting from a first local storage a copy of an application identified by a first hierarchical directory, said first server request being redirected from said first local storage to said first application in said shared storage (Column 4, lines 44-50, where the cache server may act as a proxy server if the requested object is not contained in the local cache, and the request is then routed to another local cache server), and

subsequently, a second server requesting from a second local storage a copy of an application identified by said first hierarchical directory, said second server request being redirected from said second local storage to said second application in said shared storage (Column 5, lines 52-56, where the request is server from another cache is the first does not contain the requested object).

Johnson does not teach a file system to implement, but Holcomb discloses a method for creating a virtual file system, wherein the system forms a hierarchic data structure

said first application in said shared storage having a second, extended hierarchical directory comprising said first hierarchical directory plus a lower level qualifier (Figure 1 and accompanying description, where the files F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory); and

said second application in said shared storage having a third, extended hierarchical directory comprising said first hierarchical directory plus a lower level qualifier different than the lower level qualifier of said second, extended hierarchical directory (Figure 1 and accompanying description, where the files

F85-F88 are shown at the bottom of a hierarchical data structure given by a multi-tiered directory. The differing files, e.g. F85 and F86, show that two files may contain the same high-level names, with the difference in name only on the level of the actual file).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ Holcomb's file naming system in Johnson's distributed data system. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

13. As per claim 12, the combination of Johnson and Holcomb teaches a method as set forth in claim 11 wherein said second application is a more recent version of said first application (Johnson teaches this limitation in the abstract, wherein "multiple caches may have different versions of the objects).

14. As per claim 14, the combination of Johnson and Holcomb teaches a method as set forth in claim 11 further comprising a third server which accesses from said shared storage said first application identified by said second, extended hierarchical directory prior to the subsequently routing request step (Johnson teaches this limitation. Column 4, lines 55-57, where the central server downloads the requested file over the Internet).

Claims 3, 7, 9, 13, and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson and Holcomb as applied to claims 1, 5, and 11 above, and further in view of US 7 206 852, Furguson et al.

15. As per claim 3, the combination of Johnson and Holcomb teaches a method as set forth in claim 1.

The combination does not teach rerouting an application request. Furguson teaches an application update system wherein there is a proxy server which routed said request for said application identified by said first level name and said second level name to said first server, and further comprising the step of reconfiguring said proxy server to route subsequent requests for said application identified by said first level name and said second level name to said second server instead of said first server (Furguson teaches this limitation. Figure 1 and accompanying descriptions show that in prior art, an application server may be removed from the system to be upgraded, meanwhile the requests are sent to another server).

It would have been obvious to one of ordinary skill in the art at the time of invention to use Furguson's disclosed method of rerouting server requests in the system of Johnson. The system would benefit, as it would allow traffic to be immediately rerouted to another server if the application was upgraded. After a file has been modified, the older version is no longer used, so it would be unnecessary to route requests to it. The changing of routing allows the host to have continuous access, which improves server availability and system capacity, which is beneficial and often essential (Furguson, Column 1, lines 27-31). In addition, the inclusion of Holcomb's file naming system would

also have been obvious to one of ordinary skill in the art at the time of the invention. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

16. As per claim 7, the combination of Johnson and Holcomb teaches a method as set forth in claim 5.

The combination does not teach rerouting an application request. Furguson teaches an application update system wherein there is a proxy server which routed said request for said application identified by said first hierarchical directory to said first server, and further comprising the step of reconfiguring said proxy server to route subsequent requests for said application identified by said first hierarchical directory to said second server instead of said first server (Furguson teaches this limitation. Figure 1 and accompanying descriptions show that in prior art, an application server may be removed from the system to be upgraded, meanwhile the requests are sent to another server). It would have been obvious to one of ordinary skill in the art at the time of invention to use Furguson's disclosed method of rerouting server requests in the system of Johnson. The system would benefit, as it would allow traffic to be immediately rerouted to another server if the application was upgraded. After a file has been modified, the

older version is no longer used, so it would be unnecessary to route requests to it. The changing of routing allows the host to have continuous access, which improves server availability and system capacity, which is beneficial and often essential (Furguson, Column 1, lines 27-31). In addition, the inclusion of Holcomb's file naming system would also have been obvious to one of ordinary skill in the art at the time of the invention. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

17. As per claim 13, the combination of Johnson and Holcomb teaches a method as set forth in claim 11.

The combination does not teach rerouting an application request. Furguson teaches an application update system wherein there is a proxy server which routed said request for said application identified by said first hierarchical directory to said first server, and further comprising the step of reconfiguring said proxy server to route subsequent requests for said application identified by said first hierarchical directory to said second server instead of said first server (Furguson teaches this limitation. Figure 1 and accompanying descriptions show that in prior art, an application server may be removed from the system to be upgraded, meanwhile the requests are sent to another server).

It would have been obvious to one of ordinary skill in the art at the time of invention to use Furguson's disclosed method of rerouting server requests in the system of Johnson. The system would benefit, as it would allow traffic to be immediately rerouted to another server if the application was upgraded. After a file has been modified, the older version is no longer used, so it would be unnecessary to route requests to it. The changing of routing allows the host to have continuous access, which improves server availability and system capacity, which is beneficial and often essential (Furguson, Column 1, lines 27-31). In addition, the inclusion of Holcomb's file naming system would also have been obvious to one of ordinary skill in the art at the time of the invention. Holcomb states that the system allows for large storage while using little memory (Column 1, lines 16-20). This would be beneficial in Johnson's system, as it would allow each cache to store more information in an easily accessible manner. The central server of Johnson's system would benefit especially from Holcomb's file system, as it could map the data stored in each cache, making it easier to access the data when it is requested (as it does in column 4, lines 51-67, where the data has an entry in the central server for its location).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 7 216 148, Matsunami et al discloses a system with shared access by multiple servers.

US 7 213 141, Nakayama et al discloses a system with two separate control processors accessing a shared data resource.

US 7 117 249, Kitamura et al discloses a system with multiple processors and applications having access and distributing data from a shared storage.

US 6 389 459, McDowell discloses a system which contains multiple servers which host some mirrored disk volumes and other volumes that are independent of each other.

US 5 600 832, Eisenberg et al discloses a method for allowing parts of a file to be versioned in different hierarchies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Richardson whose telephone number is (571) 270-5006. The examiner can normally be reached on Monday through Thursday, 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TR

TAGHI ARANI
PRIMARY EXAMINER
9/26/07